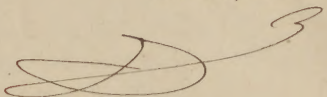
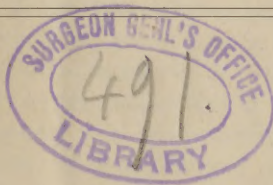


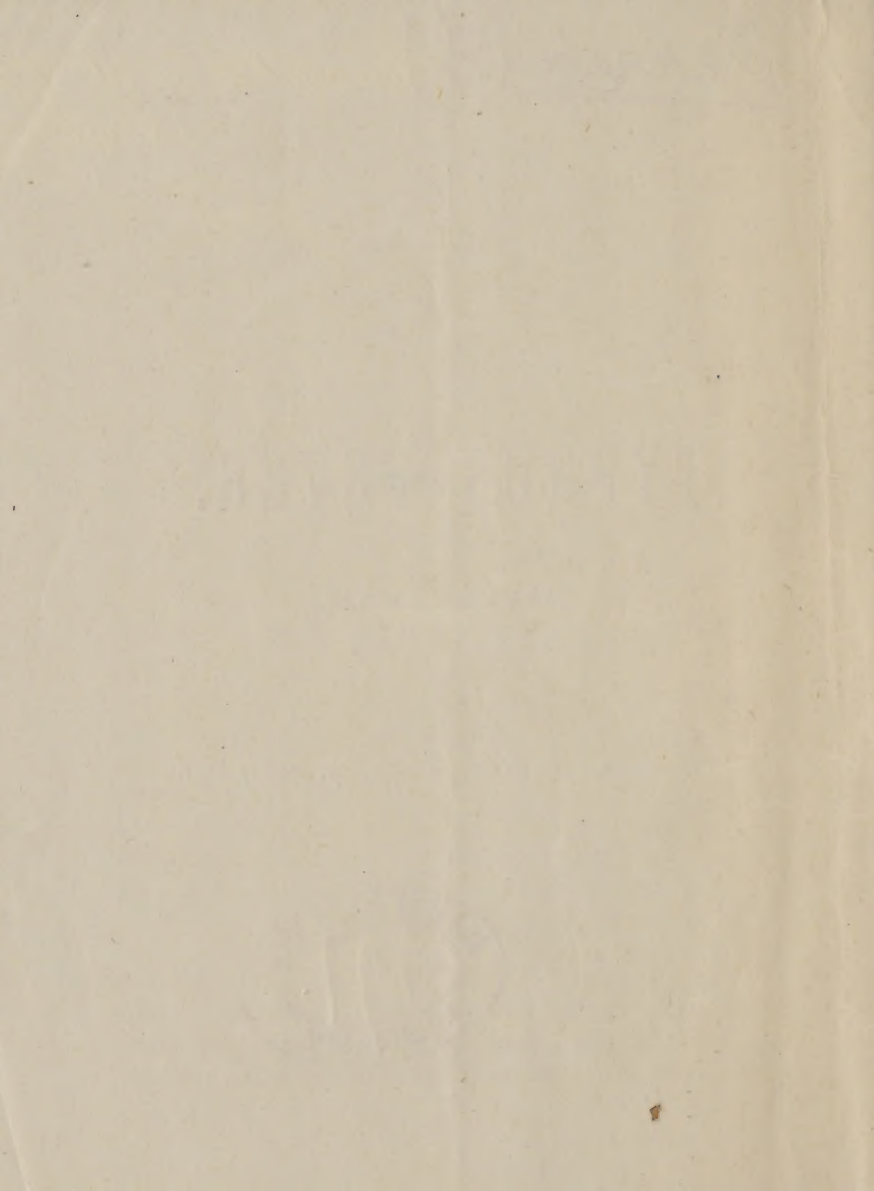
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TYPHUS FEVER.

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Typhus Fever as Met With in Mexico, With Special Reference to its Treatment.

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The quite recent outbreak of typhus fever in New York, and the appearance of the disease in Mexico, as a generalized epidemic in several of the States of that country, are circumstances which make the subject a proper theme for discussion at present. Typhus fever has invaded the cities of Mexico, Puebla, Guanajuato, Zacatecas, San Luis Potosi, Aguascalientes, Pachuca and others, where it has been raging since last December. A spread North is naturally to be feared.

The South of the United States is, as it were, sieged at this moment by a terrible enemy, and it behooves us especially to be prepared for the encounter. An invasion by the disease, of this territory, particularly across the Rio Grande, is possible and quite probable.

A consideration of the disorder in question is, then, not only interesting but absolutely necessary at this time.

While there appears to exist some differences as regards the general symptoms and characters of the typhus fever of this and other countries, and that occurring in Mexico, and a consideration of this part of the subject would be exceedingly interesting and instructive, I propose in this cursory paper, putting aside for the present at least all other questions, to call attention to the treatment of the disease, as followed in that country. I will at the same time incorporate whatever little experience I have in the matter.

In Mexico the affection under consideration is commonly called "tabardillo," and there native observers enjoying the largest experience in the study of typhus (from the fact that the disease is endemic in many parts of the Republic) differ materially, even to-day, as to the nature and characters of the disorder.

The whole subject of typhus fever as met with in Mexico, will be dealt with in a forthcoming paper now under preparation. For the present, I repeat, I will confine myself to a consideration of the treatment of the malady, especially of that most commonly observed in my country.

It may be said in general that the whole treatment of this affection is mainly symptomatic, the morbid phenomena being dealt with as they arise.

PROPHYLACTIC AND HYGIENIC MEASURES.—As soon as the diagnosis is properly made, based on unmistakable symptoms and signs, the patient is, if possible, im-

mediately isolated, placed in a well ventilated room, and so as to avoid any draughts of air. The couch on which the patient is put, as well as all bed clothing and furniture are kept scrupulously clean; the clothing of the patient is changed as frequently as possible, and thoroughly disinfected. And not only the room occupied by the patient, but the whole house is subjected constantly to as thoroughly a disinfection as possible.

Care is taken to the effect that the nurse in charge of the case enjoys the best of health, and obtains regularly the proper nourishment and amount of sleep. This attendant is recommended to use moderate alcoholic stimulation, especially by night. If practicable, the same nurse is not allowed to manage a case of typhus during the whole period of the disease, with a view to prevent contagion. As a rule a nurse who has had typhus fever is preferred. All persons, particularly children, are prohibited from even entering the apartment occupied by a typhus patient; this, on the other hand, is left alone with the nurse, in order to enhance absolute rest and quiet, and to remove all possible sources of excitement. All dishes, cups, tumblers, chambers, etc., employed by the patient are, before and after usage, thoroughly washed with boiling water, and other persons are absolutely forbidden to make use of such paraphernalia themselves. The hands of both nurse and patient are disinfected with antiseptic solutions, and care is particularly exercised to disinfect the vessels employed to receive the dejecta of the patient.

These general rules are rigidly enforced in private cases, but unfortunately they are not, cannot be fully carried into effect in hospital practice, or among the poorer classes with whom the dread scourge plays so terrible havoc. All in all, proper nursing is of the utmost importance, and often this, conjoined with good nourishment, is sufficient to carry through safely the most serious cases. A close observation of a few sporadic cases, has convinced me of the truth of my statement.

DIET, ETC.—Alimentation, throughout the course of the disease, should be of a liquid nature. It should consist chiefly of boiled milk, cow's or goat's, to which tea, coffee, or orange-leaf water may be added. The free use of tea and coffee, especially the former, is allowed. These beverages, however, though frequently given, are administered in small quantities at a time. Milk, the chief article of diet, by itself or mixed with small quantities of tea and coffee, or still with peppermint water, to suit the individual taste, is ingested at intervals of 3 or 4 hours, so that the patient may take at least from 2 to 2½ pints during the 24 hours. Later in the disease, and especially during convalescence, chicken and other animal broths, eggs, beef-tea, are given. The latter article of diet is administered twice a day, at noon and at night, with all due regularity. Fruit, such as baked apples, oranges and the like, is sometimes allowed with, of course, the necessary precautions. In all cases particular care is taken not to overload the stomach.

The hygiene of the mouth is rigidly observed, a

method to which very properly a great deal of attention is given. Before and after the ingestion of food, the mouth of the patient is thoroughly cleansed with a soft cloth moistened in a mixture of distilled water and lemon juice, equal parts. Between meals mouth washing with alkaline solutions is frequently resorted to. Thirst is allayed by means of acidulated drinks.

Above all, in typhus fever a good deal of attention is, as it should be, paid to alimentation. A typhus fever patient must be fed. The more I recall to mind the famous inscription ordered to be engraved on his tombstone by the wise English physician, the more convinced do I become of the truth of the three simple words of which such inscription consisted. And in no other febrile affection does the classical axiom of Graves hold so good as in typhus fever. I verily believe that the high mortality which this disorder is apt to reach, not only during epidemics but also at other times, is due chiefly to the lack of proper nourishment before and during the process of the disease. The prevailing terrible epidemic of typhus fever over a large portion of the Mexican Republic, bears me out in this statement. The Russian-like famine which has of late visited the poorer classes of the people of that country (Mexico) is intimately linked with the outbreak and prevalence of, and the high percentage of deaths caused by, the scourge in country-town and city, in both of which the population has been decimated almost. But it may be stated that typhus is not necessarily a disease of the destitute only. The highly contagious

character of the disorder in question is well exemplified by the fact that it does not respect age, sex, or station in life. Thus, Dr. Manuel S. Soriano, of the city of Mexico, in charge of the Hospital Juarez, and who has been kind enough to furnish me with some valuable data, writes me that just now the scourge reigns supreme over the poor as well as over the wealthy classes. The disease has made no discrimination. In fact, it has apparently never done so in Mexico. I may also remark, in passing, that, according to the statement of Soriano, the constant number of patients of typhus, in Hospital Juarez alone, is, in normal times, 60. At present the daily existence of typhus patients in that hospital, has often been 350!

The general therapeutic treatment of typhus fever, let me reiterate, is mainly expectant. The chief object is to keep up the strength of the patient, and thus the symptoms and the complications are perforce combatted as they arise. Such will be considered in the paragraphs that follow.

DRUGS AND OTHER THERAPEUTIC MEASURES.—Alcohol is one of the principal agents employed from the onset of the disease. It is given in the form of wines or brandy, well diluted and in small quantities frequently repeated according to indications. A common and efficient combination is as follows:

R _x	Distilled water	-	700.00 grammes;
	Good brandy	-	250.00 grammes;
	Sugar, s. q.	to make the mixture tasty but not too sweet.	

This quantity is to be given every 24 hours, and should be pushed especially when the patient is unwilling to take food. Later in the course of the disease, the amount of the brandy in the above combination, may be increased to 300 grammes or more. Alcohol is also used with advantage in the form of eggnoggs and milkpunches.

The two most common forms of the disease, met with in Mexico, whether the cases be sporadic or epidemic, are the ataxic and the adynamic. In both of these, especially in the adynamic type, is alcohol indicated. I have notes of cases in which this agent, freely used but not to produce a saturation of the system (when it is then more apt to act as a depressant), has been the chief means of saving life. On the other hand, I have seen fatal results follow the indiscriminate use of this substance. And I have also seen some of the worse cases recover under good nursing and the ingestion of forced alimentation, to the exclusion of alcoholic and other medicinal agents.

I may state, in general terms, based on experience, that in the treatment of typhus fever each individual case requires almost absolutely a special management. In these instances nothing is more disastrous than a routine practice. As has been wisely said by a competent authority (Dominguez, Hare's System of Therapeutics art. Typhus.), typhus is so insidious a foe, that it is not judicious to combat it always with the same weapon.

In the adynamic form, besides alcohol, other stimu-

lants and tonics are often of great service. Ammonia, nux vomica, and quinine are indicated. If the nervous symptoms are especially prominent, accompanied with marked excitement and an elevated temperature, as in the ataxic type of the disease, the remedies just alluded are of little or no value, nay, they often do harm if their employment is persisted in. In these cases, the excitability of the nerve centres, made worse by those agents, yields like a charm almost to the use of antispasmodics, and particularly the bromides.

On the contrary, in cases of typhus in which, instead of excitability a state *not* of depression but of *exhaustion* is plainly manifest, as evidenced in the persistent elevation of the bodily temperature, a temperature that will yield temporarily only to the cold bath (a parallel condition frequently observed in typhoid fever, for instance), nothing produces better, happier results than the administration of musk in full doses. I have had opportunity to observe this brilliant action of musk in cases of both typhoid and typhus.

Like diarrhea in enteric fever, in typhus constipation is the rule. Exceptions, however, occur. I have seen one typical case of typhus in which diarrhea was a prominent symptom from the very onset; but whether such phenomenon belonged to the disorder in question, or was the manifestation of another concomittant, masked affection, I am unable to say. Dominguez and other Mexican authorities speak of diarrhea as occurring in the latter stages of typhus fever. The constipation, as well as the marked meteorism accompanying it, are

combated chiefly by saline purgatives, preferably the sulphate of magnesium, or by mechanical means. Calomel in fractional doses is sometimes employed for this purpose, but more often, perhaps, cold water enemata or suppositories of glycerine are resorted to with good effect. A popular remedy among the laity, and which in common parlance is called *tianguis pepetla*, is largely employed particularly in mild cases, even by regular physicians. Dominguez favors it. This *tianguis* is nothing more than a decoction of a plant whose technical name is *Illesebram achyrantha*. An enema of the decoction acts as a mild but effective purgative.

Intestinal antiseptics is likewise attended to carefully, and is considered as an important measure. Salol, by the mouth and by the rectum, is used, provided the kidneys are in good condition. The latter method of administration of this drug is being practised to a considerable extent by Soriano. This author also speaks highly of rectal injections of the permanganate of potassium.

A symptom more frequently met with than is generally supposed is epistaxis. It is usually controlled by cold applications to the forehead, a measure which is at the same time of great service in relieving the intense headache. Often, however, the bleeding becomes almost unmanageable, and it is then absolutely necessary to resort to plugging of the nose.

A very troublesome symptom occurring particularly at the beginning of the disease is catarrh of the stomach, and as a consequence of that this organ is apt to

become highly irritable. In such conditions no medicament gives more satisfactory results than ipecacuahna. The drug serves the purpose desired without depressing the system. Other emetics are, and should be avoided. Depression, whether by drugs or other remedial measures, should *not* be induced in typhus fever in which the system, more than anything else, needs a constant supporting aid. If the irritability of the stomach is particularly marked, sedation is called for, and the ingestion of food by the mouth, for the time being at least, dispensed with. Nourishment must then be given by the rectum.

The severe headache, the delirium and the insomnia, so frequent in typhus, are relieved by the judicious employment of opiates, and particularly by the use of chloral hydrate. Hyoscine is indicated especially, and sometimes used with markedly good effect, when the delirium is of a violent nature. I, myself, have used opiates quite rarely. I am opposed, and strongly so, to using these medicaments as a matter of course, so to speak, and never give them unless severe pain is present. I also warn against the use of tartar emetic in any shape or form, even though this agent has been recommended by no less an authority than Graves. In Mexico it is rarely, if ever, used. When the insomnia is unaccompanied by severe cephalalgia, being only associated with ataxic phenomena, it can then be easily controlled, *not* by hypnotics but by depresso-motors such as valerian and camphor.

I come now to the consideration of one of the most

important parts of the treatment of typhus: the management of the fever. A continued high bodily temperature is characteristic of typhus. An extraordinary high febrile state has been noticed by various observers. Pepper ("An American Text book of the Theory and Practice of Medicine", vol. I, 1893) in a recent article refers to a case exhibiting a temperature of 109° F. on the fourth day of the disorder, and yet the patient recovered. I have seen one case, a man 38 years of age, who, on the fifth day of the disease, had a febrile reaction of 42° C. (107.6° F.), and on the sixth day a febrile reaction of 42.5° C. (108.5° F.). The patient made a good recovery. I believe that this high temperature in typhus, whatever its cause, contributes largely to fatal results. It not only depresses but finally exhausts the nerve centers.

I need hardly say that the febrile phenomenon is attended to from the very onset of the disease. If the rise of the bodily temperature occurs in exacerbations, as it often happens particularly in malarial regions, no remedy is more effective than quinine. The administration of this drug is associated with vigorous rubbing of the body and sponging with tepid, *not* cold, water. Should the temperature continue high, as is more often the case, and especially in the ataxic type of the disorder, other antithermic remedies are employed, such as astipyrin, acetanilid and the like. These synthetic preparations, however, are cautiously administered, and their ingestion is entirely dispensed with if phenomena of prostration should supervene as a direct consequence

of their action. In these instances all medication by drugs is abandoned, and the Brand system substituted. This latter method has of late become quite popular in Mexico in the treatment of typhus fever, and the results recorded have been most brilliant. The patient is not plunged at once into cold but in *tepid* water, the liquid being gradually cooled down to the required degree, that is, until the thermometer begins to mark the decline of the bodily heat. The patient is then taken out of the bath tub and placed between blankets. Thus chilling of the body is guarded against. The measure is repeated as often as is necessary.

This method, however, is never applied in adynamic cases, undoubtedly with good reasons. Under such circumstances, the bathing is not only useless, but contraindicated—contraindicated not perhaps because the method is harmful in itself, but because, in the first place, the manipulation necessarily attached to its application only adds to the exhaustion of the patient, while the fever, on the other hand, only temporarily diminished, soon regains its previous abnormal height in spite of the bath and the administration of alcohol. It is in just such conditions that vigorous stimulation of the exhausted nerve centers is called for. This is accomplished by the administration of musk and nutritious enemata. In my experience, as intimated before, musk has given brilliant results.

Of recent years, Mexican physicians have been employing strychnine with excellent effect, especially when the prostration of the patient is marked and com-

plete collapse threatened. This drug is highly recommended by Dominguez. The alkaloid, particularly in the form of the sulphate, is given hypodermically.

Other tonics are given sometimes, such as nux vomica, caffeine, and the preparations of cinchona bark. In the present epidemic Soriano is using, with apparently good effect, the following prescription:

R. Infusion of red cinchona, 125.00 grammes.
 Wine of cinchona, - 30.00 grammes.
 Cognac, - - - 30.00 grammes.
 Salicylate of sodium, 4.00 grammes.
 Caffeine, - - - 0.50 gramme.
 Hoffman's anodyne, - 1.00 gramme.
 Syrup, q. s.

M.

Sig. A teaspoonful as required.

The treatment of typhus fever may be resumed in a few words: Good hygiene; thorough disinfection of the patient as well as of the apartment he occupies; efficient nursing; nutritious liquid food by the stomach or rectum; intestinal antiseptics; reduction of the temperature; general stimulation, and the avoidance of the routine practice of administering drugs indiscriminately. In these cases it is often better to "throw physic to the dogs."

If I were asked by a confused tyro in the practice of the healing art (not to say by an experienced brother practitioner), what to do in a desperate case of typhus, I would unhesitatingly give him the following advice,

taking for granted that he has a fair knowledge of general principles and is able to exercise good judgment: "In the first place, feed your patient; look into disinfection and intestinal antisepsis; keep down the temperature. Secondly, feed your patient; look into disinfection and intestinal antisepsis; keep down the temperature. Thirdly, feed your patient; look into disinfection and intestinal antisepsis; keep down the temperature!"